

### **Amendments to the Claims:**

This listing of claims will replace all prior versions and listings of claims in the application.

### **Listing of Claims:**

1. - 55. (Cancelled)

### **What is claimed is:**

56. (New) A plant product produced from a barley plant, or a part thereof, wherein the barley plant has a mutation in the LOX-1 gene causing a total loss of LOX-1 activity.

57. (New) The plant product of claim 56, wherein the plant product is a malt composition comprising a processed barley plant or part thereof, wherein said barley plant has a mutation in the LOX-1 gene causing a total loss of LOX-1 activity.

58. (New) The malt composition according to claim 57, wherein said part of said barley plant is kernel(s).

59. (New) The plant product of claim 56, wherein said plant product is a wort composition prepared from:

- a) the barley plant or part thereof; or
- b) a malt composition prepared from said barley plant or part thereof; or
- c) a mixture of a) and b).

60. (New) The wort composition according to claim 59, wherein said part of said plant is kernel(s).

61. (New) The wort composition according to claim 59, wherein said malt composition is a malt composition comprising a processed barley plant or part thereof, wherein said barley plant has a mutation in the LOX-1 gene causing a total loss of LOX-1 activity.

62. (New) The wort composition according to claim 59, wherein said composition is prepared further using an enzyme composition or an enzyme mixture composition.

63. (New) The plant product of claim 56, wherein the plant product is a composition prepared from a mixture of (i) a composition comprising a barley plant or a part thereof; wherein the barley plant has a mutation in the LOX-1 gene causing a total loss of LOX-1 activity, and (ii) a malt composition according to claim 57.

64. (New) The plant product of claim 56, wherein the plant product is a wort composition or a beverage prepared from the composition of claim 63.

65. (New) The plant product of claim 56, wherein the plant product is a beverage having stable organoleptic qualities, wherein said beverage is obtained by manufacturing a barley plant or part thereof, wherein the barley plant has a mutation in the LOX-1 gene causing a total loss of LOX-1 activity.

66. (New) The plant product of claim 65, wherein said beverage is beer.

67. (New) The plant product of claim 65, wherein said beverage is prepared using malt prepared from kernels of said barley plant.

68. (New) The plant product of claim 65 wherein said beverage is prepared from a wort composition prepared from a barley plant or part thereof, or from a malt composition prepared from said barley plant or part thereof.

69. (New) The plant product of claim 65, wherein said beverage is prepared from unmalted barley plants or parts thereof.

70. (New) The plant product of claim 65, wherein said beverage is a non-fermented beverage.

71. (New) The plant product of claim 65, wherein said barley plant, or parts thereof, comprise a LOX-1 gene, said gene comprising:

- (i) a nonsense codon; or
- (ii) a splice site mutation.

72. (New) The plant product of claim 71, wherein the gene encoding LOX-1 comprises:

- (i) a nonsense codon, said codon corresponding to base no.s 3572–3574 of SEQ ID NO: 2; or
- (ii) a splice site mutation, said mutation corresponding to base no. 2311 of SEQ ID NO: 6.

73. (New) A beverage having stable organoleptic qualities, wherein said beverage is manufactured by using a barley plant, wherein the ratio of 9,12,13–trihydroxyoctadecenoic acid to 9,10,13–trihydroxyoctadecenoic acid within said beverage is at the most 1.8.

74. (New) The beverage according to claim 73, wherein said beverage is beer.

75. (New) The beverage of claim 73, wherein said beverage comprises at the most 0.05 ppb free *trans*-2-nonenal (T2N) after incubation at 37°C for 4 weeks, in the presence of in the range of 4 to 6 ppm sulfite.

76. (New) The plant product according to claim 56, wherein said plant product is a beverage.

77. (New) A method of producing:

- (i) a food composition; or
- (ii) a feed composition; or
- (iii) a fragrance raw material composition; or
- (iv) a malt composition; or

- (v) a wort composition; or
- (vi) a beverage; or
- (vii) any combination of (i) to (vi);

using a barley plant or part thereof, wherein the barley plant has a mutation in the LOX-1 gene causing a total loss of LOX-1 activity.

78. (New) The plant product of claim 56, wherein said plant product is a food composition, a feed composition, or a fragrance raw material composition comprising the barley plant or part thereof, wherein the barley plant has a mutation in the LOX-1 gene causing a total loss of LOX-1 activity.

79. (New) A method for expressing a recombinant protein in barley to obtain a barley plant having a mutation in the LOX-1 gene causing a total loss of LOX-1 activity, wherein said method comprises stably transforming said plant with a nucleic acid sequence comprising, as operably linked components, a promoter expressible in barley plants or parts thereof, a DNA sequence encoding said recombinant protein, and a transcriptional termination region.

80. (New) The method of claim 77 wherein said method is a method for producing a beverage having stable organoleptic qualities, said method comprising the steps of:

- (i) preparing a composition comprising a barley plant or parts thereof, wherein the barley plant has a mutation in the LOX-1 gene causing a total loss of LOX-1 activity;
  - (ii) processing the composition of (i) into a beverage;
- thereby obtaining a beverage with stable organoleptic qualities.

81. (New) The method according to claim 80, wherein step (i) comprises preparing a malt composition from kernels of said barley plant or part thereof.

82. (New) The method according to claim 80, wherein the method further comprises incubation with a LOX inhibitor.

83. (New) The method according to claim 80, wherein processing the composition into a beverages comprises a mashing step.

84. (New) The method according to claim 80, wherein a LOX inhibitor is added during said mashing step.

85. (New) The method of claim 77, wherein said method is a method for producing a malt composition with no LOX-1 activity, said method comprising the steps of:

- (i) providing kernels from a barley plant having a mutation in the LOX-1 gene causing a total loss of LOX-1 activity;
- (ii) steeping said kernels;
- (iii) germinating the steeped kernels under predetermined conditions;
- (iv) treating germinated kernels with heat;

thereby producing a malt composition with no or low LOX-1 activity.